

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1 - 21. (cancelled)

22. (currently amended) A foldable member comprising:

at least a first tube made of layers of material;

at least one predetermined hinge area along the length of the first tube; and

a plurality of opposing elongated slots at the predetermined hinged area in

the tube through the layers of material forming separated longitudinal strips of

layers of tube material between the slots, said tube configured to fold at said hinge

area ~~only~~ when said longitudinal strips of material are subjected to localized

buckling forces.

23. (original) The foldable member of claim 22 in which first tube includes a sheet of plastic material wrapped around itself several times forming the layers of tube material.

24. (original) The foldable member of claim 23 further including an adhesive securing the layers of plastic material to each other at selected locations along the length of the tube.

25. (original) The foldable member of claim 24 in which the adhesive is a tape.

26. (original) The foldable member of claim 24 in which the sheet of plastic material

comes from a roll of plastic stock material and has a round memory.

27. (original) The foldable member of claim 22 in which the layers of material are laminated to each other except at the predetermined hinge area.

28. (previously presented) The foldable member of claim 22 in which there are a plurality of opposing sets of slots.

29. (previously presented) The foldable member of claim 28 in which there are at least four slots, one set of two slots opposing another set of two slots.

30. (currently amended) A The foldable member of claim 22 in which comprising:
~~at least a first tube made of layers of material;~~
~~at least one predetermined hinge area along the length of the first tube; and~~
~~opposing sets of elongated slots in the tube at the hinge area thereof~~
~~forming separated longitudinal strips of tube material between the slots, each slot of each set of~~
~~elongated slots is separated longitudinally along the length of the tube from each adjacent slot by~~
~~a bridge element of tube material, said tube configured to fold at the hinge area only when said~~
~~longitudinal strips of tube material are subjected to localized buckling forces.~~

31. (currently amended) The foldable member of claim 30 22 in which the opposing sets of elongated slots are diametrically opposed from each other on the tube.

32. (currently amended) The foldable member of claim 30 28 in which each slot in each set of slots is diametrically opposed from a slot in the opposing set of slots.

33. (currently amended) The foldable member of claim 30 22 in which there are two sets of slots.

34. (currently amended) The foldable member of claim 33 31 in which there are two slots in each set of slots.

35. (currently amended) The foldable member of claim 30 22 in which there are two sets of slots and two slots in each set.

36. (currently amended) The foldable member of claim 30 22 in which there is a stress relieving member attached to ~~each bridge element on~~ the inside of the tube.

37. (currently amended) The foldable member of claim 30 22 in which the tube is made of a plastic material.

38. (currently amended) The foldable member of claim 30 22 in which the tube is made of a composite material.

39. (currently amended) The foldable member of claim 38 in which the composite

material includes a triaxial braid of fibers in a resin matrix.

40. (currently amended) The foldable member of claim 30 22 in which there are a plurality of hinge areas spaced from each other along the length of the tube, each hinge area including opposing sets of elongated slots.

41. (currently amended) The foldable member of claim 30 22 further including an electrical conductor disposed in the tube.

42. (currently amended) The foldable member of claim 30 22 further including at least one transducer device located proximate a hinge area for controlling the folding of the longitudinal strips of tube material.

43. (previously presented) The foldable member of claim 40 further including slot reinforcing members disposed in the slots.

44. (previously presented) The foldable member of claim 40 in which the elongated slots are triangle shaped.

45. (previously presented) The foldable member of claim 40 in which the elongated slots are diamond shaped.

46. (previously presented) The foldable member of claim 40 in which there are four slots

in each set of slots, each slot of a pair of the four slots opposing another slot.

47. (previously presented) The foldable member of claim 40 in which each slot has a reduced diameter portion.

48. (previously presented) The foldable member of claim 40 further including a second tube disposed inside the first tube.

49. (previously presented) The foldable member of claim 48 in which the second tube includes opposing sets of elongated slots at the hinge area thereof.

50. (currently amended) A collapsible and deployable truss structure comprising:

a plurality of joined members;

a selected number of said members each including:

a tube made of layers of material;

at least one predetermined hinge area along the length of the tube;

and

a plurality of opposing elongated slots in the tube at the hinge area thereof forming separated longitudinal strips of tube material between the slots, said tube configured to fold at the hinge area only when the longitudinal strips of tube material are subjected to localized buckling forces directly to the hinge areas.

51. (previously presented) The structure of claim 50 in which there are opposing sets of elongated slots; each slot of each set of elongated slots separated longitudinally along the length of the tube from each adjacent slot by a bridge element of tube material.

52. – 66. (cancelled)

67. (currently amended) A collapsible structure comprising:

a plurality of joined members;

a selected number of said members each including:

a tube made of layers of material;

at least one predetermined hinge area along the length of the tube;

and

a plurality of sets of opposing elongated slots in the tube at the hinge area thereof and separated longitudinal strips of tube material between the slots, each slot of each set of elongated slots separated longitudinally along the length of the tube from each adjacent slot by a bridge element of tube material, said tube configured to fold at said hinge area ~~only~~ when said longitudinal strips of tube material are subjected to localized buckling forces.

68. – 71. (cancelled)